

SEQUENCE LISTING

IAP20 Res of PCT/US 06 APR 2006

5

## SEQUENCE LISTING

<110> Aventis Pasteur, Ltd.  
Therion Biologics, Inc.

10 <120> Modified CEA Nucleic Acid and Expression Vectors

<130> API-001-020-PCT

<140> PCT/US03/10916

15 <141> 2003-04-09

<150> US 60/370,972

<151> 2002-04-09

20 <160> 8

<170> PatentIn version 3.2

<210> 1

25 <211> 47

<212> DNA

<213> synthetic

<400> 1

30 ggacggtagt aggtgtatga tggagatata gttgggtcgt ctgggcc

47

<210> 2

<211> 27

35 <212> DNA

<213> Synthetic

<400> 2

cagaatgaat tatccgttga tcactcc

27

40

<210> 3  
<211> 45  
<212> DNA  
<213> Synthetic  
5  
<400> 3  
cgtgacgacg attaccgtgt atgagccacc aaaaccattc ataac 45

10 <210> 4  
<211> 45  
<212> DNA  
<213> Synthetic

15 <400> 4  
gttatgaatg gttttggtgg ctcatcacg gtaatcgtcg tcacg 45

<210> 5  
20 <211> 35  
<212> DNA  
<213> Synthetic

<400> 5  
25 ctggcgcgcc ttctttattc tataacttaa aagtg 35

<210> 6  
<211> 36  
30 <212> DNA  
<213> Synthetic

<400> 6  
35 ctggtaccag aaaaactata tcagagcaac cccaac 36

<210> 7  
<211> 2106  
<212> DNA  
40 <213> Homo sapiens

<400> 7  
atggagtctc cctcggtccc tccccacaga tgggtgcatcc cctggcagag gctcctgctc 60  
5 acagcctcac ttctaacctt ctggaacccg cccaccactg ccaagctcac tattgaatcc 120  
acgccgttca atgtcgcaga ggggaaggag gtgcttctac ttgtccacaa tctgccccag 180  
catctttttg gctacagctg gtacaaaggt gaaagagtgg atggcaaccg tcaaattata 240  
10 ggatatgtaa taggaactca acaagctacc ccagggcccg catacagtgg tcgagagata 300  
atatacccca atgcatccct gctgatccag aacatcatcc agaatgacac aggattctac 360  
15 accctacaag tcataaagtc agatcttgtg aatgaagaag caactggcca gttccgggta 420  
taccgggagc tgccaagcc ctccatctcc agcaacaact ccaaaccggt ggaggacaag 480  
gatgctgtgg ccttcacctg tgaacctgag actcaggacg caacctacct gtggtgggta 540  
20 aacaatcaga gcctcccggt cagtcccagg ctgcagctgt ccaatggcaa caggaccctc 600  
actctattca atgtcacaag aatgacaca gcaagctaca aatgtgaaac ccagaaccca 660  
25 gtgagtgcc a ggcgcagtga ttcagtcac ctgaatgtcc tctatggccc ggatgcccc 720  
accatttccc ctctaaacac atcttacaga tcaggggaaa atctgaacct ctctgccac 780  
gcagcctcta acccacctgc acagtactct tggtttgtca atgggacttt ccagcaatcc 840  
30 acccaagagc tctttatccc caacatcact gtgaataata gtggatccta tacgtgcca 900  
gcccataact cagacactgg cctcaatagg accacagtca cgacgatcac agtctatgag 960  
35 ccacccaaac ccttcatcac cagcaacaac tccaaccccg tggaggatga ggatgctgta 1020  
gccttaacct gtgaacctga gattcagaac acaacctacc tgtggtgggt aaataatcag 1080  
agcctcccg tcagtcccag gctgcagctg tccaatgaca acaggaccct cactctactc 1140  
40

agtgtcacaa ggaatgatgt aggaccctat gagtgtggaa tccagaacga attaagtgtt 1200

gaccacagcg acccagtcac cctgaatgtc ctctatggcc cagacgaccc caccatttcc 1260

5 ccctcatata cctattaccg tccaggggtg aacctcagcc tctcctgcca tgcagcctct 1320

aaccacctg cacagtattc ttggctgatt gatgggaaca tccagcaaca cacacaagag 1380

10 ctctttatct ccaacatcac tgagaagaac agcggactct atacctgcca ggccaataac 1440

tcagccagtg gccacagcag gactacagtc aagacaatca cagtctctgc ggagctgccc 1500

aagccctcca tctccagcaa caactccaaa cccgtggagg acaaggatgc tgtggccttc 1560

15 acctgtgaac ctgagggtca gaacacaacc tacctgtggt gggtaaattg tcagagcctc 1620

ccagtcagtc ccagggtgca gctgtccaat ggcaacagga ccctcactct attcaatgtc 1680

acaagaaatg acgcaagagc ctatgtatgt ggaatccaga actcagtgag tgcaaaccgc 1740

20 agtgacccag tcaccctgga tgtcctctat gggccggaca ccccatcat ttcccccca 1800

gactcgtctt acctttcggg agcggacctc aacctctcct gccactcggc ctctaacca 1860

25 tccccgcagt attcttggcg tatcaatggg ataccgcagc aacacacaca agttctcttt 1920

atcgccaaaa tcacgcaaaa taataacggg acctatgcct gttttgtctc taacttggct 1980

actggccgca ataattccat agtcaagagc atcacagtct ctgcatctgg aacttctcct 2040

30 ggtctctcag ctggggccac tgteggcatc atgattggag tgctggttgg ggttgctctg 2100

atatag 2106

35

<210> 8

<211> 2106

<212> DNA

<213> Synthetic

40

<400> 8  
atggagttct cctcggtccc tccccacaga tgggtgcatcc cctggcagag gctcctgctc 60  
acagcctcac ttctaacctt ctggaacccg cccaccactg ccaagctcac tattgaatcc 120  
5 acgccgttca atgtcgcaga ggggaaggag gtgcttctac ttgtccacaa tctgccccag 180  
catctttttg gctacagctg gtacaaaggt gaaagagtgg atggcaaccg tcaaattata 240  
10 ggatatgtaa taggaactca acaagctacc ccagggcccc catacagtgg tcgagagata 300  
atatacccca atgcatccct gctgatccag aacatcatcc agaatgacac aggattctac 360  
accctacacg tcataaagtc agatcttgtg aatgaagaag caactggcca gttccgggta 420  
15 tacccggaac tccctaagcc ttctattagc tccaataata gtaagcctgt cgaagacaaa 480  
gatgccgtcg cttttacatg cgagccccgaa actcaagacg caacatatct ctggtgggtg 540  
20 aacaaccagt cctgcctgt gtcccctaga ctccaactca gcaacggaaa tagaactctg 600  
accctgttta acgtgaccag gaacgacaca gcaagctaca aatgcgaaac ccaaaatcca 660  
gtcagcgcca ggaggtctga ttcagtgatt ctcaacgtgc tttacggacc cgatgctcct 720  
25 acaatcagcc ctctaaacac aagctataga tcaggggaaa atctgaatct gagctgtcat 780  
gccgctagca atcctcccgc ccaatacagc tggtttgtca atggcacttt ccaacagtcc 840  
30 acccaggaac tggttcattcc caatattacc gtgaacaata gtggatccta cacgtgcca 900  
gctcacaata gogacaccgg actcaaccgc acaaccgtga cgacgattac cgtgtatgag 960  
ccacccaaac cattcataac tagtaacaat tctaaccagc ttgaggatga ggacgcagtt 1020  
35 gcattaactt gtgagccaga gattcaaat accacttatt tatgggtgggt caataaccaa 1080  
agtttgccgg ttagcccacg cttgcagttg tctaatagata accgcacatt gacactcctg 1140  
40 tccgttactc gcaatgatgt aggaccttat gagtgtggca ttcagaatga attatccgtt 1200

gatcactccg accctgttat ccttaatgtt ttgtatggcc cagacgaccc aactatatct 1260

ccatcataca cctactaccg tcccggcgtg aacttgagcc tttcttgcca tgcagcatcc 1320

5 aacccccctg cacagtactc ctggctgatt gatggaaaca ttcagcagca tactcaagag 1380

ttattttataa gcaacataac tgagaagaac agcggactct atacttgcca ggccaataac 1440

10 tcagccagtg gtcacagcag gactacagtt aaaacaataa ctgtttccgc ggagctgccc 1500

aagccctcca tctccagcaa caactccaaa cccgtggagg acaaggatgc tgtggccttc 1560

acctgtgaac ctgaggctca gaacacaacc tacctgtggt gggtaaattg tcagagcctc 1620

15 ccagtcagtc ccaggctgca gctgtccaat ggcaacagga ccctcactct attcaatgtc 1680

acaagaaatg acgcaagagc ctatgtatgt ggaatccaga actcagttag tgcaaaccgc 1740

20 agtgaccag tcaccctgga tgtcctctat gggccggaca ccccatcat ttcccccca 1800

gactcgtctt acctttcggg agcggacctc aacctctcct gccactcggc ctctaacca 1860

tccccgcagt attcttggcg tatcaatggg atacgcagc aacacacaca agttctcttt 1920

25 atcgccaaaa tcaogccaaa taataacggg acctatgcct gttttgtctc taacttggct 1980

actggccgca ataattccat agtcaagagc atcacagtct ctgcactcgg aacttctcct 2040

30 ggtctctcag ctggggccac tgtcggcatc atgattggag tgctggttgg ggttgctctg 2100

atatag 2106